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TITLE: ULTRASONIC SWITCH

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ABSTRACT:

PURPOSE: To enable the detection of an object to be detected at a short **distance**, by driving a switching element at the time of the end of a transmission period of an ultrasonic vibrator, so as to damp reverberation vibrations of transmission waves caused by the ultrasonic vibrator.

CONSTITUTION: An ultrasonic vibrator 1 driven by a drive circuit 2 oscillates an ultrasonic wave, while receiving a reflected wave from an object 3 to be detected. A transmission-reception switching circuit 7 **switches** over a reception circuit 4 and the drive circuit 2 periodically. A series circuit of a switching element 10 composed of a resistor having a relatively low resistance value and a transistor is connected in parallel with the ultrasonic vibrator 1, and it is driven by the transmission-reception switching circuit 7. The switching element 10 is driven at the time of the end of the transmission

period of the ultrasonic vibrator 1, so as to **damp** the reverberation vibrations of transmission waves caused by the ultrasonic vibrator 1. Thereby reception waves are prevented from dissipating together with the reverberation vibrations of the transmission waves even when a **distance** to the object 3 to be detected is short.

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